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The Weaponization of Water: Hydro-Politics and Security Challenges in South Asia

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Introduction

What was once simply a vital resource has become a scarce, contested, and strategic resource in South Asia. Supporting agriculture, energy production, and urban development, river systems have evolved from being mere providers of life to tools of political influence. This transformation into hydro-politics the strategic use of water as a means of geopolitical leverage has made shared rivers potential sources of conflict and control[2].

A dry riverbed in the Eastern Himalayas highlights the stark effects of climate change on river flow, biodiversity, and regional water security. Source: Research Gate

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[2]Zeitoun, M. & Warner, J. 2006. "Hydro-hegemony – A Framework for Analysis of Trans-boundary Water Conflicts." *Water Policy* 8(5): 435–460.

South Asia ranks among the world's most water-scarce regions, despite its heavy dependence on river systems. Pakistan relies on the Indus basin for almost 80% of its irrigation needs and more than one-third of its electricity generation[3]. Similarly, India depends extensively on shared rivers such as the Ganges, Brahmaputra, Ravi, and Teesta, which support millions of people's livelihoods. Since many of these rivers originate in upstream countries, these nations hold significant strategic advantage over those downstream.

In April 2025, India demonstrated the strategic potential of water when it reportedly suspended parts of the Indus Waters Treaty in response to a terrorist attack in Kashmir. While India did not formally withdraw from the treaty, its declaration to "maximize its usage" of the Indus waters provoked strong reactions from Islamabad, which warned that any disruption would be regarded as an "act of war"[4]. This incident underscored the fact that water is no longer simply a neutral resource but has emerged as a critical element of geopolitical power.

Major Trans-boundary River Systems in South Asia

The water resources of South Asia are primarily shaped by several major transboundary river systems that provide for hundreds of millions of people across various countries. The largest and most intricate of these is the Ganges-Brahmaputra-Meghna (GBM) basin, which is shared among India, Bangladesh, Nepal, and China[5]. This extensive river network supports intensive farming, fisheries, and urban water demands, but managing it is complex due to the differing priorities of riparian states and vulnerabilities linked to climate. Variations in monsoon patterns and upstream infrastructure developments, particularly in China and India, create downstream impacts in Bangladesh that raise significant water security concerns.

[3] Qamar, U. (ed.) 2005, *Pakistan's water economy: running dry*, World Bank Working Paper, World Bank, Washington, DC, July 24 2025 https://openknowledge.worldbank.org/entities/publication/f9762988-8617-5a79-9481-34f0df9da678/

[4] Financial Times (2025) *Water or blood: tensions grow over India and Pakistan's shared rivers*. 30 April. https://www.ft.com/content/1edf1989-8d31-4c0b-8982 1edefcedf01f

[5] IWMI 2020, *The Ganges-Brahmaputra-Meghna Basin: Challenges and Opportunities*, International Water Management Institute, https://www.iwmi.cgiar.org/what-we-do/ganges-brahmaputra-meghna-basin/.

The Indus River system, shared primarily by India and Pakistan, is the most politically sensitive. Originating in Tibet and flowing through Indian-administered Jammu and Kashmir into Pakistan, the Indus underpins Pakistan's agriculture and energy sectors. The Indus Waters Treaty (1960) remains the principal legal framework governing water sharing, yet recent political tensions have put its stability under threat[6].

The Indus Waters Treaty (1960) is a water-sharing agreement between India and Pakistan governing the use of the Indus River system. Source: World Bank

The Teesta River, which originates in India's Sikkim and West Bengal before entering Bangladesh, remains a major source of bilateral tension. The prolonged delay in finalizing the Teesta Water Sharing Agreement highlights the persistent challenges in India-Bangladesh water negotiations. Although Bangladesh stresses the river's importance for irrigating its northern farmlands, political disagreements within India particularly at the state level have obstructed progress, making it harder to foster mutual trust[7].

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[6] World Bank 1960, *Indus Waters Treaty*, viewed 25 July 2025, https://openknowledge.worldbank.org/entities/publication/f9762988-8617-5a79-9481-34f0df9da678/.

[7] Baruah, A. 2021, 'India-Bangladesh water disputes: The Teesta Agreement', *Observer Research Foundation*, 25 July 2025, https://www.orfonline.org/research/india-bangladesh-water-disputes-the-teesta-agreement/.

The Indus Waters Treaty (IWT), which has served for decades as the foundation for water-sharing between India and Pakistan, now faces significant strain due to shifting hydro-political dynamics and the intensified impacts of climate change. India's position as an upstream country frequently raises concerns in Pakistan, especially during periods of military tension, when control over water resources is perceived as a strategic advantage. As environmental challenges grow, so too does their influence on regional security climate change intensifies existing vulnerabilities, acting as a catalyst for deeper water-related and geopolitical conflicts[8].

Water as a Geopolitical Tool

In South Asia, transboundary river systems have taken on growing importance as tools of geopolitical influence. Countries located upstream most notably China and India hold significant authority over the flow of rivers that extend into downstream nations such as Pakistan and Bangladesh. This upstream dominance grants them strategic advantages, enabling the potential use of water access as a means of exerting political or diplomatic pressure.

[8] Sarwar, G. and Farid, A. (2020) 'The Indus Under Pressure: Hydro-Politics, Climate Change, and Strategic Anxiety in South Asia', *Journal of Political Studies and Public Administration (JPSA)*, 6(1), pp. 45-59.

Upstream nations often exert influence over downstream countries by constructing and operating hydraulic infrastructure such as dams, reservoirs, and barrages. These installations allow them to manage water flow holding it back during rainy periods and releasing it in drier times effectively controlling both the volume and timing of water that reaches downstream users.

A notable example is China's extensive development of dams along the Brahmaputra River (known domestically as the Yarlung Tsangpo), which has raised serious concerns in both India and Bangladesh. There are fears that China might exploit its upstream position by withholding water during dry spells or releasing excessive volumes to induce downstream flooding. These anxieties are heightened by the absence of binding water-sharing treaties and the limited transparency surrounding China's water management strategies[9].

India's role as the upper riparian in the Indus basin further highlights how water can serve as a geopolitical instrument. The 1960 Indus Waters Treaty, facilitated by the World Bank, remains the primary framework governing water distribution between India and Pakistan, having withstood multiple bilateral conflicts. Nonetheless, it faces periodic stress. In the aftermath of incidents like the 2016 Uri attack and the 2019 Pulwama bombing, Indian officials hinted at possibly curtailing water supplies to Pakistan in response. Although such threats have not been implemented, they underscore the potential for water to be used as a tool of political coercion, exposing the fragility of even long-standing water-sharing agreements[10].

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[9] Liu, Jia. 2019. "China's hydro-hegemony in transboundary river governance." *Water International*, June, pp. 547–563. https://doi.org/10.1080/02508060.2019.1647165.

[10] Qamar, U. (ed.). 2005. *Pakistan's Water Economy: Running Dry*. World Bank Working Paper. https://openknowledge.worldbank.org/entities/publication/f9762988-8617-5a79-9481-34f0df9da678/.

The deliberate management of water resources for strategic purposes has far-reaching implications beyond state-to-state relations, directly affecting the economic stability, social livelihoods, and environmental health of downstream populations. Interruptions in natural water flow can disrupt farming, fisheries, and local ecosystems undermining food security and income sources thereby making diplomatic engagement and regional cooperation even more challenging in these already sensitive areas[11].

The weaponization and containment of water. *Source: Sustainability Directory*

Climate Change as a Threat Multiplier

Climate change acts as a powerful "threat multiplier" in South Asia, heightening pre-existing risks and geopolitical strains in an already water-scarce region. Rapid melting of Himalayan glaciers which serve as the lifeline for key rivers such as the Indus, Ganges, and Brahmaputra is disrupting river flow patterns and diminishing long-term water availability. This shift places immense pressure on the water security of billions who rely on these river systems for farming, electricity generation, and everyday survival[12].

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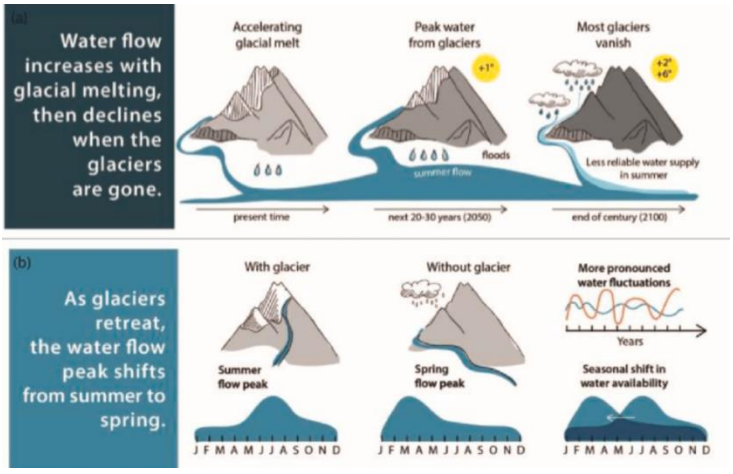
[11] Wolf, Aaron T. 2007. 'Shared waters: Conflict and cooperation', *Annual Review of Environment and Resources*, vol. 32, pp. 241-269. https://doi.org/10.1146/annurev.energy.32.041006.101434.

[12] IPCC. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK and New York, NY, USA: Cambridge University Press.

In addition to existing challenges, the region is facing increasingly erratic monsoon cycles and a rise in extreme weather events, including severe droughts that harm crop production and devastating floods that force people from their homes and damage infrastructure. These climate-driven changes in water patterns are intensifying shortages, which in turn trigger a chain reaction of social, economic, and political instability. With less water available for farming and daily use, many communities are experiencing serious threats to their livelihoods, leading to greater food insecurity and financial strain. These difficult conditions often force individuals and families to migrate, both within their own countries and across borders, in search of better opportunities and survival.

When people are forced to move, cities become crowded. This puts pressure on resources and can create tension between newcomers and locals. Ultimately, the competition over dwindling water resources, exacerbated by these climate impacts, heightens the risk of inter-state and intra-state conflicts, transforming shared resources into flashpoints for dispute[13]. Thus, climate change doesn't merely add new problems; it magnifies pre-existing fragilities, transforming environmental challenges into acute security dilemmas.



This schematic illustrates how climate change shifts glacial melt from stable, seasonal river flow to erratic or reduced runoff, highlighting the water security risks facing Himalayan river basins. Source: Zoï Environment Network (2020).

[13] Chellaney, B. 2013, *Water: Asia's New Battleground*, Georgetown University Press, Washington, DC.

Security Challenges and Risks

Water security is no longer a background issue it's now central to South Asia's survival. The convergence of climate pressures, outdated infrastructure, and intensifying geopolitical rivalries has exposed the region to a range of evolving threats. One growing concern is hydro-terrorism the intentional sabotage of water infrastructure such as dams or canals.

Although no concrete plots have been publicly confirmed targeting dams in Jammu & Kashmir, Indian security agencies increased surveillance around such key sites, particularly in areas affected by insurgency, following the February 2019 Pulwama incident[14]. Equally alarming are the consequences of mismanagement and resource scarcity. The 2019 water crisis in Chennai serves as a powerful example: severe reservoir depletion led to widespread unrest and public demonstrations in a major Indian metropolis, highlighting how quickly water scarcity can escalate into urban disorder[15].

In addition, India has voiced serious concerns over China's dam-building activities on the Yarlung Tsangpo (known downstream as the Brahmaputra), particularly given the absence of a formal water-sharing treaty between the two nations[16]. These hydro-political tensions are further inflamed by unresolved territorial disputes, making water a strategic tool of influence and power. When coupled with shrinking glaciers, changing precipitation patterns, and growing demand, the region faces escalating security risks. Clearly, water in South Asia has moved beyond a development issue it now sits at the heart of national and regional security imperatives.

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[14] Council on Strategic Risks (2020) *Climate Change and the India Pakistan Rivalry*, BRIEFER No. 4, January. https://councilonstrategicrisks.org/wp-content/uploads/2020/02/ShidoreJan23ClimatePakistan.pdf

[15] BBC News (2019) *Chennai water crisis: How the city ran out of water*. 1 July. https://www.bbc.com/news/world-asia-india-48797399

[16] Financial Times (2025) *Undermining the Indus Waters Treaty imperils Indian security*, 7 May. https://www.ft.com/content/ebe93133-cc7b-44b7-81e9-e7bf2a3595d0

Conclusion

In South Asia, water is no longer just something we need to live it has become a powerful and sometimes dangerous tool. Rivers like the Indus are not only shared by countries, but also used to gain political advantage. Agreements like the Indus Waters Treaty, which have helped keep peace for many years, are now under pressure because of rising tensions and environmental problems. When countries like India and China control rivers, it makes others feel nervous and increases the risk of conflict.

Climate change is making the situation worse. Glaciers are melting, monsoons are changing, and extreme weather like floods and droughts is happening more often. These changes are making water harder to find, which leads to food shortages, people losing their jobs, and even being forced to leave their homes. If we're not careful, these problems can grow into bigger fights between and within countries.

So, through this topic, we taught ourselves that water is not just about drinking and farming it is also about power, peace, and survival. And we learnt that if countries don't work together to share water fairly, everyone will suffer. South Asia must now choose its path: to fight over water or to share it responsibly. The future depends on our choice. Working together is not just smart it's necessary.